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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/732,812	12/11/2003	Hideaki Machida	9553.004.00-US	5892

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Washington, DC 20006

EXAMINER

VALENROD, YEVGENY

ART UNIT	PAPER NUMBER
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1621

MAIL DATE	DELIVERY MODE
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05/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/732,812

Applicant(s)

MACHIDA, HIDEAKI

Examiner

Yevgeny Valenrod

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 5-9 and 12-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Newly amended claims 5-9 and 12-16 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The amendment dated 2/21/07 has switched the statutory class of invention from claims directed to a product to claims directed to a method.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-4 and 10-11, drawn to a material represented by the general formula $(R_1R_2)P-(R)_n-Si(X_1X_2X_3)$, classified in class 556, subclass 404.
- II. Claims 5-9 and 12-16, drawn to a method for forming copper undercoat films, classified in class 438, subclass 687.

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the product can be used in a materially different process. For example, Allum et al. (US 3,726,809) use the same product for formation of catalyst support material.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required

because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

Election by original presentation

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 5-9 and 12-16 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Notice of Potential Rejoinder

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product

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are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Status of claims and rejections made in the previous office action

Rejection of claims 4 and 11 under 35 USC 112 2nd paragraph is maintained. Text of the rejection appears below followed by examiners response to applicants' remarks.

Rejection of claims 1-16 under 35 USC 102(b) made over Krocher et al. is withdrawn in view of applicants amendments.

New rejection of claims 1-4 and 12-16 under 35 USC 102(b) is made over Krocher et al.

Maintained Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4 and 11 recite the limitation "diphenylphosphino" in the list of compounds by which the material of claims 1 and 2 is characterized. There is insufficient antecedent basis for this limitation in the claim. Claims 1 and 2 define the phosphorus substituents R_1 and R_2 as alkyl groups (1-21 carbon limitation in claim 2). The term alkyl is not defined in the specification. The accepted definition of the term alkyl does not include aryl groups. Therefore, compounds that include a diphenylphosphino moiety lack antecedent basis.

Response to applicants' remarks

Applicant has traversed the rejection. Applicant states that independent claims 1 and 2 recite "compounds represented by the general formula $(R_1R_2)P-(R)_n-Si(X_1X_2X_3)$ " has "aromatic rings or alkyl-groups containing aromatic rings". After careful consideration of claims 1 and 2, it is examiners position that the definition "aromatic rings or alkyl groups containing aromatic rings" is directed to the identity of variable (R). There is no language in claim 1 or claim 2 that defines R_1 or R_2 as aromatic groups. Compound 1-diphenylphosphino-2-trimethoxysilylethane is claimed in claims 4 and 11. In the said compound R_1 and R_2 are both phenyl groups, which lack antecedent basis.

Maintained Claim Rejections - 35 USC § 102

Claims 1-3 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Allum et al. (US 3,726,809).

In column 15, claim 3, line 40-49 Allum et al disclose generic compound, which anticipates the generic claims 1-3 and 10-11.

To further clarify the rejection examiner draws applicants' attention to example 1 in column 8, line 28, where Allum et al. disclose (trisethoxysilyl)ethyldiphenylphosphine, a compound of the instant invention.

Response to applicants' remarks

Applicant argues that the material claimed prevents copper diffusion, while Allum's product has no such property.

Allum et al. disclose the same product as is instantly claimed (see example 1).

Although Allen et al. propose a different use for the said product; the product itself is the same. A compound and its properties are inseparable. In re Papesch, 315 F.2d 381, 137 USPQ 43 (CCPA 1963).

New Claim Rejections - 35 USC § 102

The following rejection was necessitated by applicants' amendment.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

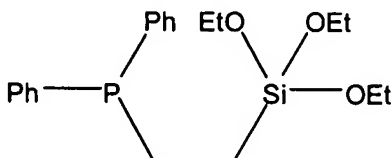
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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Krocher et al. (*Journal of Catalysis*, **1998**, 178, p 284-298).

On page 285, column 2, in the second paragraph of the section titled "EXPERIMENTAL" Krocher et al. disclose (triethoxysilyl)ethyldiphenylphosphine which has the following structure:



This is the same compound as 1-diphenylphosphino-2-triethoxysilylethane recited in claims 4 and 11. The above compound meets the structural limitations of claims 1-4 and 10-11.

Claims 1-4 and 10-11 contain limitations directed to the intended use of the product for forming copper undercoat films. "It is well settled that the intended use of a composition or product (e.g. as a cosmetic composition) will not further limit claims drawn to a composition or product, so long as the prior art discloses the same composition comprising the same ingredients in an effective amount as instantly claimed". See, e.g., *Ex parte Masham*, 2 USPQ2d, 1647.

Limitation directed to the materials ability to prevent copper diffusion is inherently present in the product described by Krocher et al. Krocher et al. describe the same

product as is claimed. Compound and its properties are inseparable. In re Papesch, 315 F.2d 381, 137 USPQ 43 (CCPA 1963).

Conclusion

Claims 1-16 are pending

Claims 5-9 and 12-16 are withdrawn

Claims 1-4 and 10-11 are rejected

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

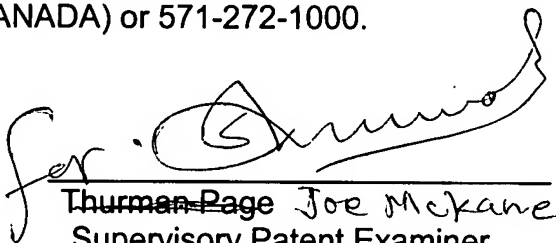
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yevgeny Valenrod whose telephone number is 571-272-9049. The examiner can normally be reached on 8:30am-5:00pm M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ^{Joe McKane} ~~Thurman Page~~ ⁰⁶⁹⁹ can be reached on 571-272-0892. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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